

What is claimed is:

1. A vertical takeoff and landing apparatus comprising:

an airframe having a propulsion device for generating propulsive force in a vertically upward direction, and a side wall surface surrounding said propulsion device;

an air intake port having a plurality of divided air intake port sections formed on said side wall surface of said airframe;

a duct part connecting said air intake port sections and said propulsion device with one another;

a plurality of shutter parts each provided at a corresponding one of said air intake port sections for adjusting an amount of air flowing therein; and

a control unit for adjusting the degree of opening of each of said shutter parts in accordance with an operation of a control stick.

2. A vertical takeoff and landing apparatus comprising:

an airframe having a propulsion device for generating propulsive force in a vertically upward direction, and a side wall surface surrounding said propulsion device;

an air intake port having a plurality of air intake port sections formed on said side wall surface of said airframe;

a duct part connecting said air intake port sections and said propulsion device with one another;

a plurality of plates of an airfoil cross section each provided at a corresponding one of said air intake port sections for adjusting an amount of air flowing therein;

a plurality of pairs of support members each provided at both ends of a corresponding one of said plates for rotatably supporting the corresponding plate;

a plurality of pairs of actuators each for driving the both ends of a corresponding one of said plates thereby to individually make variable an angle of attack and an angle of tilt thereof; and

a control unit for adjusting an amount of operation of each actuator in accordance with an operation of a control stick.

3. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, further comprising:

an annular storage member disposed to surround a pilot who gets on board an upper surface of said airframe;

an airbag received in said storage member;

a gas generator for generating a high pressure gas which is to be supplied to said airbag so as to inflate it;

a valve for controlling said high pressure gas to be supplied from said gas generator to said airbag; and

a sensor for detecting the state of movement of said airframe and generating an output signal representative of the state of movement thus detected to said control unit;

wherein said control unit further controls said valve based on the output signal from said sensor in such a manner that said valve is opened to supply said high pressure gas to said airbag for inflation thereof.

4. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, further comprising:

a landing airbag provided at a lower surface side of said airframe;

a gas generator for generating a high pressure gas which is to be supplied to said landing airbag so as to inflate it;

a valve for controlling said high pressure gas to be supplied from said gas generator to said landing airbag; and

a sensor for detecting the state of movement of said airframe and generating an output signal representative of the state of movement thus

detected to said control unit;

wherein said control unit further controls said valve based on the output signal from said sensor in such a manner that said valve is opened to supply said high pressure gas to said landing airbag for inflation thereof.

5. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, further comprising:

a fuel tank attached to said airframe; and

a variable support part for supporting a held position of said fuel tank at least three points in a variable manner;

wherein said control unit further controls said variable support part in such a manner that said fuel tank is held at an arbitrary angle so as to induce the fuel in said fuel tank to a specific position therein to facilitate the fuel supply.

6. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, further comprising:

a fuel tank attached to said airframe; and

a variable support part for supporting a held position of said fuel tank at least three points in a variable manner;

wherein said control unit further controls said variable support part in such a manner that said fuel tank is held at an arbitrary angle so as to induce the fuel in said fuel tank to a specific position therein to facilitate the fuel supply; and

said variable support part further has a function of metering an amount of fuel in said fuel tank; and

said control unit controls said variable support part based on the amount of fuel metered by said variable support part in such a manner that said fuel tank is held at an arbitrary angle.

7. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, further comprising:

a plurality of wheels provided at a lower side of said airframe for supporting said airframe in a manner as to enable it to travel; and

a plurality of turbines each attached to an inner side of a corresponding one of said wheels and adapted to be rotated by a gas supplied thereto to drive said wheels to rotate;

wherein said propulsion device comprises an engine of a type capable of generating a high pressure gas, and

said apparatus further comprises a gas distribution system for distributing the high pressure gas from said propulsion device so as to supply it to said plurality of turbines.

8. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, further comprising wheels being held in such a manner that they can be extended in any of downward and side directions of said airframe;

wherein when said airframe is caused to go up and down while being forced to approach a vertical wall existing outwardly of said airframe, said wheels are made to project in a side direction of said airframe so as to be placed in contact with said vertical wall.

9. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, wherein said propulsion device comprises a propeller and a turbine to which said propeller is coupled, and wherein a high pressure gas is supplied to said turbine whereby said turbine is driven to rotate said propeller thereby to generate propulsive force.

10. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, wherein said propulsion device comprises a propeller and a turbine to which said propeller is coupled, and wherein a high pressure gas is supplied to said turbine whereby said turbine is driven to rotate said propeller thereby to generate propulsive force; and

said high pressure gas is a high pressure gas that is supplied by a high pressure gas generator disposed outside said propulsion device, or a

high pressure gas extracted from a jet engine or a detonation pulse engine.

11. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, wherein said propulsion device comprises a propeller and a turbine to which said propeller is coupled, and wherein a high pressure gas is supplied to said turbine whereby said turbine is driven to rotate said propeller thereby to generate propulsive force; and

streams of air sucked through said plurality of air intake port sections are merged with one another at a location upstream of said propeller.

12. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, wherein said propulsion device comprises either one of a jet engine, a turbo fan engine, a motor which is adapted to be driven to operate by means of a fuel cell and has a propeller or a fan coupled with its output shaft, and an internal combustion engine which has a propeller or a fan coupled with its output shaft.

13. The vertical takeoff and landing apparatus as set forth in claim 1 or 2, wherein each of said air intake port sections is covered with a net member.